

**Work Order ID 60894**

Monday, July 26, 2010 1:55:49 PM



Page 1

Item ID: D4148-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Lug Assembly, Fwd

Start Date: 7/26/2010 Start Qty: 4.00



Cust Item ID:

Required Date: 8/2/2010 Req'd Qty: 4.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

10-7-24

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D4148

B

100

0.00



Small Fab

Memo

0.00

Small Fab

1- Assemble as per dwg

8/10/08/23 (D)

110

0.00



QC

QC5- Inspect part completeness to step on W/O

Memo

0.00

Quality Control

8/10/08/23

(74)

120

0.00



Packaging

Identify as per dwg &amp; Stock Location:

468

Memo

0.00

Packaging

10/8/24 (42)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 60894**

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Page 2

Item ID: D4148-041

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Start Date: 7/26/2010 Start Qty: 4.00



Cust Item ID:

Required Date: 8/2/2010 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/08/26 JG  
CZ10/8/24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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**NOTE:** Date & initial all entries

# Picklist Print

Monday, July 26, 2010 1:55:52 PM

Page 1

Work Order ID: 60894

Parent Item: D4148-041

Parent Item Name: Crosstube Lug Assembly, Fwd


Start Date: 7/26/2010

Required Date: 8/2/2010

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A 10.06.24 new issue DD verf:EC  
IPP Rev:B 10.07.22 as per revB DD verf:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4148-5 		Manufactured	No			100	Each	0.0000	1	4			
Eyebolt Stud MS20615-4M18 		Purchased	No			100	Each	534.0000	7	28			
Rivet													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST323				534					
					114808			164					
					115037			370					
D2690-6 		Manufactured	No			100	Each	23.0000	1	4			
Lanyard Assembly													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST020				23					
					59960			23					
D4148-1 		Manufactured	No			100	Each	0.0000	2	8			
Crosstube Lug Plate, Fwd													
D4148-3 		Manufactured	No			100	Each	0.0000	1	4			
Stud Receiver, Lower													

B61005 (42)

EB10/08/23

EB10/08/23

28

EB10/08/23

4

B61006 (84)

EB10/08/23

B61007 (42)

EB10/08/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Work Order ID: 60894

Parent Item: D4148-041

Parent Item Name: Crosstube Lug Assembly, Fwd

Start Date: 7/26/2010

Required Date: 8/2/2010

Start Qty: 4.00

Required Qty: 4.00

D3910-1  
Crosstube Lug

Manufactured No 100 Each 24.0000 1 4

Location	Loc Qty	Loc Code
st507	24	
59349	23	
59708	1	

*E/S 0/08/23*

D4091-1  
Mounting Lug

Manufactured No 100 Each 2.0000 1 4

Location	Loc Qty	Loc Code
ST460	2	
60239	2	

*E/S 0/08/23*  
*B60874 (4x)*

AN3C12A  
Bolts

Purchased No 100 Each 44.0000 4 16

Location	Loc Qty	Loc Code
ST351	44	
112314	8	
114761	22	
115016	14	

*E/S 0/08/23*  
*1115392 (16x)*

AN4C13A  
BOLT

Purchased No 100 Each 104.0000 1 4

Location	Loc Qty	Loc Code
ST357	104	
113359	3	
114108	1	
114442	50	
114615	50	

*E/S 0/08/23*

W/O:		WORK ORDER CHANGES					
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Monday, July 26, 2010 1:55:53 PM

Page 3

Work Order ID: 60894

Parent Item: D4148-041

Parent Item Name: Crosstube Lug Assembly, Fwd

Start Date: 7/26/2010

Required Date: 8/2/2010

Start Qty: 4.00

Required Qty: 4.00

MS17984-C413

Purchased

No

100

Each

27.0000

1

4



PIN, QUICK RELEASE

Location

Loc Qty

Loc Code

ST297

4

114340

4

ST314

23

114523

1

114774

2

114886

20

4

MS21043-3

Purchased

No

100

Each

2,985.000

4

16



Nut

Location

Loc Qty

Loc Code

FG

76

103691

76

ST301

2909

107280

4

112314

2905

16

MS21043-4

Purchased

No

100

Each

1,220.000

1

4



Nut

Location

Loc Qty

Loc Code

FG

40

104603

40

ST301

1180

112492

25

113069

8

114348

347

114523

500

114784

300

4

Monday, July 26, 2010 1:55:53 PM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Monday, July 26, 2010 1:55:53 PM

Page 4

Work Order ID: 60894



Parent Item: D4148-041



Parent Item Name: Crosstube Lug Assembly, Fwd

Start Date: 7/26/2010

Required Date: 8/2/2010

Start Qty: 4.00

Required Qty: 4.00

NAS1149C0332R

Purchased

No

100

Each

3,480.000

8

32



*Ep 5/10/08/23*

Washer

Location

Loc Qty

Loc Code

ST297

3480

113524

10

113737

150

115000

3320

*32*

NAS1149C0432R

Purchased

No

100

Each

724.0000

2

8



*Ep 5/10/08/23*

Washer

Location

Loc Qty

Loc Code

ST297

724

114292

134

114742

590

*8*

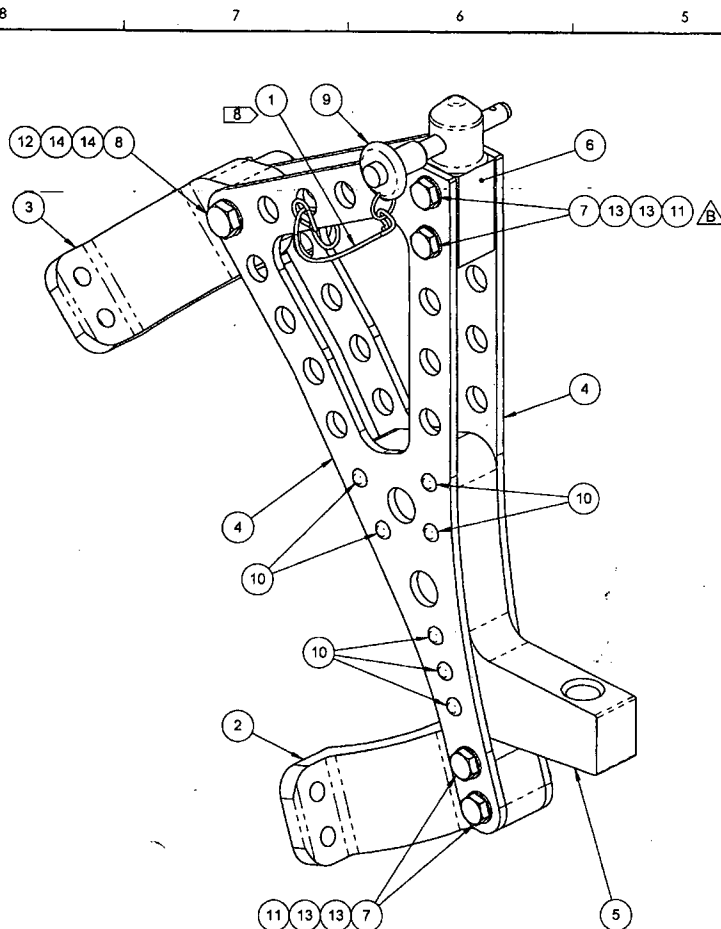
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**D4148-041 FWD X-TUBE LUG ASSY**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4148-041" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 3.47 lbs
- 8) ATTACH D2690-6 TO D4148-1 BY LOOPING AROUND A LIGHTENING HOLE FIRST AND THEN SECURE TO MS17984-C413

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 60899  
BS10-7-24

ITEM	QTY -041	P/N	DESCRIPTION
	X	D4148-041	FWD X-TUBE LUG ASSY
1	1	D2690-6	LANYARD
2	1	D3910-1	X-TUBE LUG
3	1	D4091-1	MOUNTING LUG
4	2	D4148-1	FWD X-TUBE LUG PLATE
5	1	D4148-3	STUD RECEIVER LOWER
6	1	D4148-5	EYEBOLT STUD
7	4	AN3C12A	
8	1	AN4C13A	BOLT
9	1	MS17984-C413	PIP PIN
10	7	MS20615-4M18	RIVET
11	4	MS21043-3	NUT
12	1	MS21043-4	NUT
13	8	NAS1149C0332R	WASHER
14	2	NAS1149C0432R	WASHER

**RELEASED**  
2010-07-16  
MD

B	REPLACED QTY(3) MS20615-4M18 WITH QTY(2) EACH AN3C12A, MS21043-3 AND QTY(4) NAS1149C0332R WASHER (ZN D3-1, B7-2 & B4-2); MS20615-4M18 WAS MS20615-4M20 (ZN D3-1 & B7-2); Ø0.191 2 PL REPLACES Ø0.129 3 PL (ZN D6-3); Ø0.129 7 PL WAS 10 PL (ZN A7-3); Ø0.191 WAS Ø.129 (ZN C8-5); REASON: SEE TR-D350-607-2 REV. B.	MB	10.07.05
A	NEW ISSUE	MB	10.06.18
REV.	DESCRIPTION	BY	DATE
DESIGN	1/4		
DRAWN	1/4		
CHECKED	1/4		
MFG. APPR.	1/4		
APPROVED	1/4		
DE APPR.	1/4		
DATE	10.07.05		
<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA DRAWING NO. <b>D4148</b> TITLE <b>FWD X-TUBE LUG ASSY</b> SCALE <b>NTS</b> REV. B SHEET 1 OF 5 COPYRIGHT © 2010 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

**Dart Aerospace Ltd**

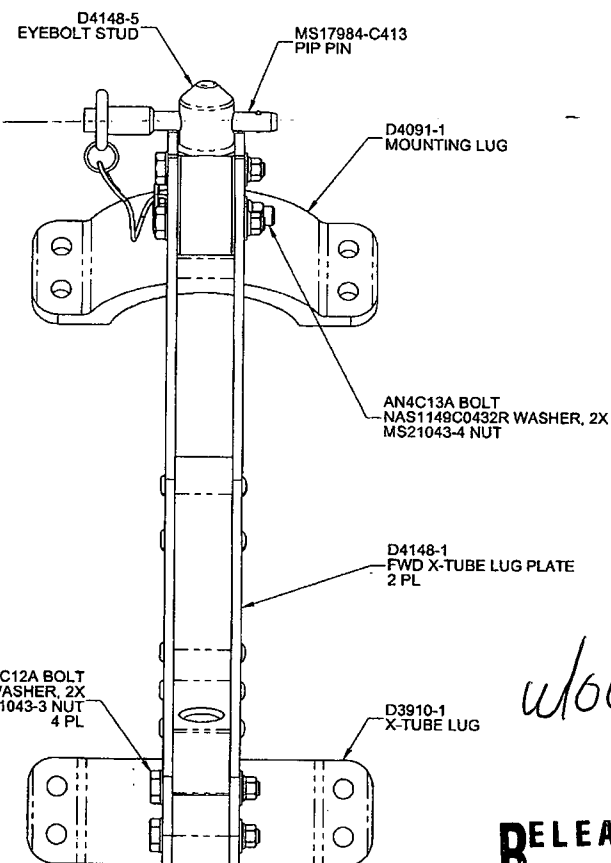
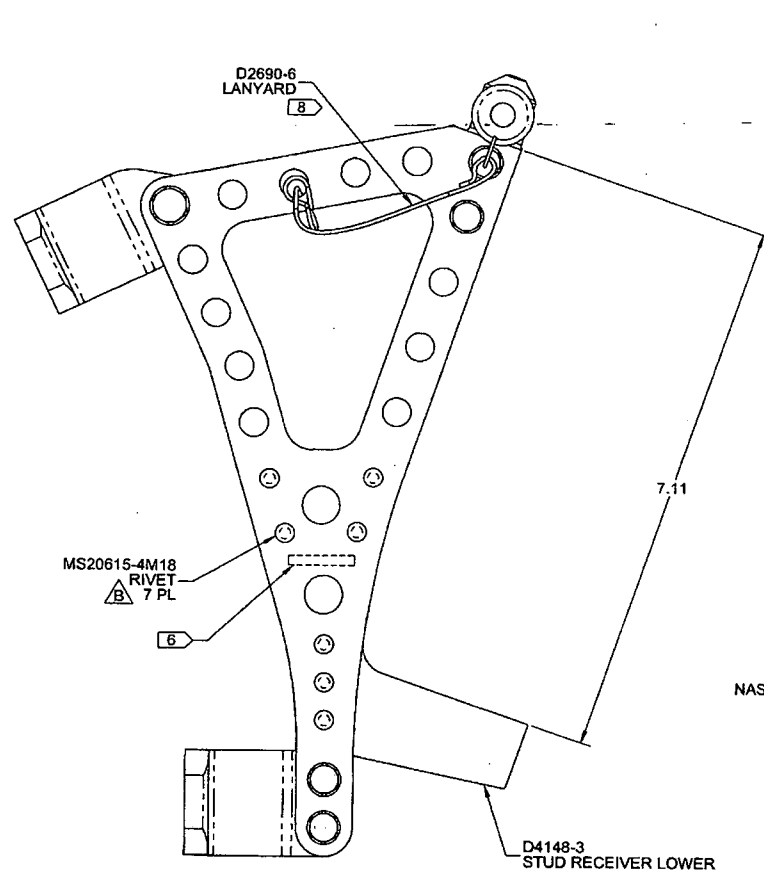
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_






NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**D4148-041 FWD X-TUBE LUG ASSY**

**RELEASED**  
2010-07-16  
MP

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D4148	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		FWD X-TUBE LUG ASSY	NTS
DATE	10.07.05	COPYRIGHT © 2010 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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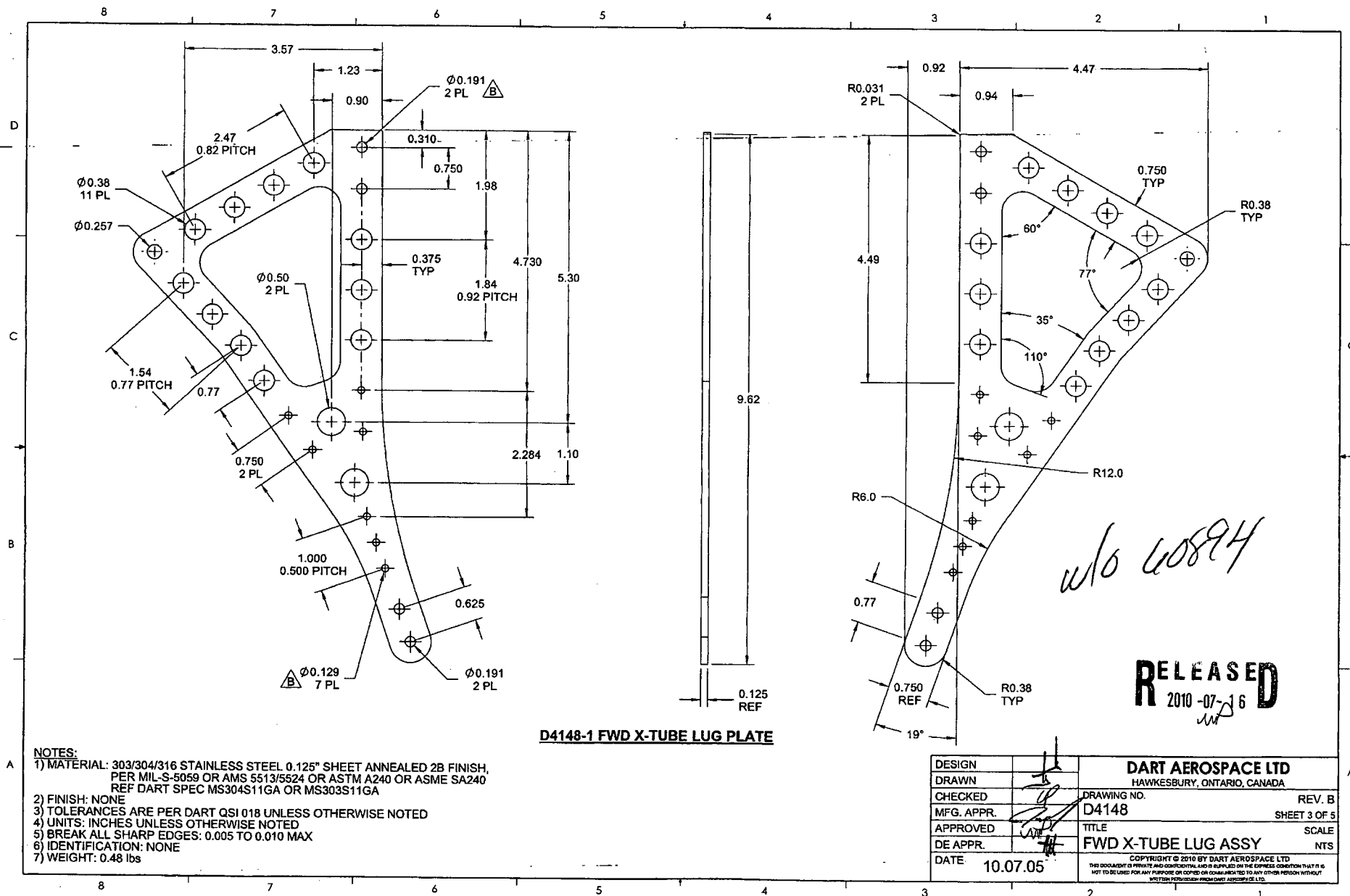
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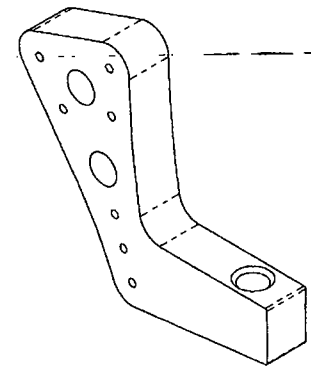
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**NOTE:** Date & initial all entries




**SECTION A-A**

**D4148-3 STUD RECEIVER LOWER**

RELEASED  
2010-07-16

NOTES:

- NOTES:**  
 1) MATERIAL: 303/304/316 STAINLESS STEEL BAR PER ASTM A582 OR ASTM A276  
 REF DART SPEC MS304B OR MS303B  
 2) FINISH: NONE  
 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED  
 4) UNITS: INCHES UNLESS OTHERWISE NOTED  
 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX  
 6) IDENTIFICATION: NONE  
 7) WEIGHT: 1.44 lbs

DESIGN			<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN			DRAWING NO.	REV. B
CHECKED			D4148	SHEET 4 OF 5
MFG. APPR.			TITLE	SCALE
APPROVED			FWD X-TUBE LUG ASSY	NTS
DE APPR.			COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD. IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCIAL TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	
DATE -	10.07.05			

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

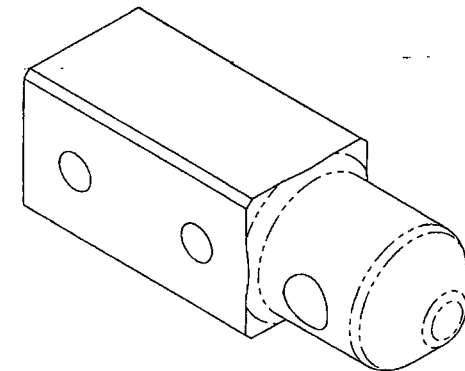
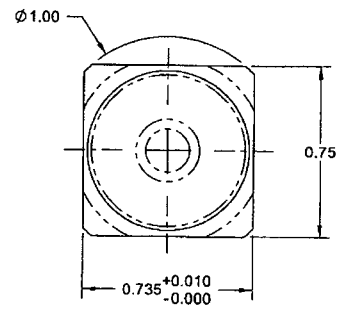
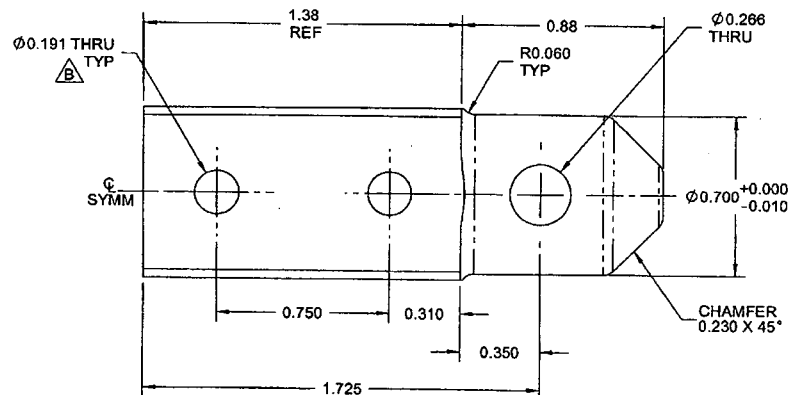
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8 7 6 5 4 3 2 1



**D4148-5 EYEBOLT STUD**

*w/o 60894*

**RELEASED**  
2010-07-16

**NOTES:**

- 1) MATERIAL: 303/304/316 STAINLESS STEEL BAR PER ASTM A582 OR ASTM A276  
REF DART SPEC MS304B OR MS303B
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.28 lbs

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D4148	SHEET 5 OF 5
APPROVED		TITLE	SCALE
DE APPR.		FWD X-TUBE LUG ASSY	NTS
DATE	10.07.05	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

8 7 6 5 4 3 2 1

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